

# Virginia Wildlife

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# Virginia Wildlife

*Dedicated to the Conservation of  
Virginia's Wildlife and Related Natural Resources  
and to the Betterment of  
Outdoor Recreation in Virginia*

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**COVER:** Widely distributed over the continent, the mourning dove is one of the most abundant and most popular of North American game birds. Through earmarked excise taxes collected on the ammunition expended in pursuit of this swift and graceful flier, dove hunting probably contributes more funds to wildlife management programs than does the hunting of any other single species. Our artist: W. D. Rodgers, Jr., Deland, Florida.

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## The Feel of Autumn

SOMETIME this month the long, hot summer will end and autumn will lay her mantle on the land. It is surprising how much better autumn can make one feel.

For people who measure time and seasons by clock and calendar, the change will occur at a precise moment on September 22 when the earth in its orbit has the sun directly over the planet's equator. Other signals of autumn's advent cannot be predicted with such accuracy, but they can be looked for with a keener sense of anticipation and their meaning is never in doubt.

The last of their broods on the wing, mourning doves gather in huge flocks to forage in grain field and weed patch. Migrant songbirds begin to pass through, often filling the night-time sky with their contact calls and stopping to loiter and feed along the way by day. Once nearly deserted marshes fill to overflowing with clapper rails and sora. Bass seem to be taken with a feeding frenzy, and anglers declare that they are shaking off the laziness induced by summer heat. Biologists disagree, pointing out that cooling water does not make the fish more active, but only more hungry as summer's abundance of natural food diminishes. But no matter why, the heavier strings of fish are a sign of fall. Gray squirrels diligently harvest the crop of ripening nuts. A wedge of southbound geese, symbol of all the autumns that ever were or ever will be, passes overhead. The sights, the sounds, the feel of autumn have arrived, and these are signs of the change of seasons more significant than the equinox to people who have the eyes and the ears and the perception to recognize and enjoy them.

To those whose lot it is to spend much time outdoors, the glorious and exhilarating onset of autumn is hard to miss. To urban dwellers, which most of us are now, whose daily stint outside four walls is often confined to an hour or so in traffic jams, the end of summer may well mean little more than the end of vacation season and the settling down to another long grind. This is poverty of spirit, indeed! It is up to us to make the conscious effort to know the season not by the calendar but through the stimulation of our senses and perceptions—through the sights, the sounds, the smells and above all the understanding and appreciation of what is going on outdoors at this time of fulfillment in the natural cycle of the seasons.

So sally forth, equipped with shotgun, binoculars, or just plain comfortable walking clothes. Seek out long trails and lonesome places. Renew contact with the land, its untamed creatures, and the world of things not made by man. It's surprising how much better autumn can make you feel.—J. F. Mc.

### Coon Hunters' Note

IT is getting close to that time of year again when the nights feel cool, corn is getting ripe, and the 'coons are on the prowl.

Some 'coon hunters still think they can smoke a 'coon out of a hollow tree. Not only is it illegal—it *can't be done*. A 'coon will stay in a hollow and burn up before it will come out. I know it is a fact. Many decades ago I tried it. In recent years I've had to help fight forest fires started from attempts to smoke out 'coons. Last October 22 someone tried to smoke out a 'coon on Bullpasture Mountain. The fire burned 29.4 acres, and fire control costs to the Game Commission were \$139.90. The next morning I found the dead 'coon in the chestnut oak.

So, Mr. 'Coon Hunter, get a faster, better dog, but leave your matches at home and we will all be better off.

Roy Hodge  
Headwaters

### Defends Fox Trapping

IN reply to the letter criticizing Mr. W. A. Kindervater in the July issue of *Virginia Wildlife*, we heartily disagree with the ideas expressed concerning the trapping of the fox. We happen to be among the "farmer friends" for whom Mr. Kindervater traps. As for "providing brush piles, hedgerows, and a little food," our farm abounds with these natural habitats. Even with this advantageous environment we had practically no rabbits left on our farm until Mr. Kindervater began trapping. Before Mr. Kindervater trapped, the rabbits were decreasing by "leaps and bounds" rather than increasing.

Mr. Kindervater is by no means devastating the fox population, but rather protecting the fox as well as other animals by minimizing the chance of a rabies epidemic. Therefore, we feel that Mr. Kindervater should be commended for his efforts in protecting "Virginia wildlife."

C. Dabney Allen, Jr.  
Faye Allen Joy  
Ladysmith

*We thought when we ran the picture of the fox pelts that we would get some adverse reader reaction, and we were not disappointed.*

*Actually, our opinion, based upon a good deal of scientific evidence, lies somewhere between those who approve of and those who object to the trapping. Foxes have sufficient reproductive capacity to withstand the removal of a reasonable number of individuals without detriment to the population. It seems to be a fact that when a high density fox population is thinned a bit in any locality, the remaining ones respond by producing larger litters which have a higher survival rate. Therefore, the result of trapping a reasonable number is quite temporary as far as the fox population is concerned, but by the same token the result is quite temporary as far as its effect on the population of rabbits, mice and other prey species is concerned, too. In most situations a reasonable amount of trapping is neither especially beneficial nor harmful, in itself, although a massive extermination campaign may be an entirely different matter.—Ed.*



# SQUIRRELS AND RIFLES

By ALBERT G. SHIMMEL  
*West Decatur, Pennsylvania*



UNITED States is a country steeped in tradition. Certain combinations are an ingrained part of our heritage. No matter how much excellence is found in the individual components when compounded, they complement each other so as to become inseparable. Consider such food combinations as ham and eggs, bacon and beans, chicken and biscuits, buckwheat cakes and sausage, and catfish and hush-puppies.

Squirrel hunting with a rifle is a traditional combination. It is bound in a wrapping of buckskin, in the smell of burned powder and appetite-pleasing taste of squirrel potpie. It had its origin in the Appalachian Mountains, the shops of the German gunsmiths of Lancaster, and the thrift of our colonial ancestors.

When after the back-breaking toil of clearing, planting, hoeing and tending, the maturing corn gave promise of roasting ears, hominy grits, corn bread and mush, the hordes of squirrels descended from the trees to join in the harvest. The sturdy settlers looked upon corn as the difference between a full belly and famine. The rifle was their defense. Men, boys, and often women and girls learned to speed a bullet to its mark. Powder was precious and lead was scarce so that the waste of either was not tolerated. Small wonder that soldiers of the mother-land learned from sad experience to dread the accuracy of the squirrel rifle in the hands of these buckskin clad experts.

The pioneers learned from their Indian neighbors just how tasty squirrels could be. Practicing true economy they ate their kill, tanned the skins in a mixture of lye soap and ashes, and made whang leather and rawhide from the surplus. The furred skins made warm moccasin liners, tough mittens, fur caps and bullet pouches. Even the tails provided a jaunty decorative touch to otherwise drab costumes.

The wide cultural gap between the colonists and their blood relatives in Europe was accentuated by the fact that in this country corn formed a staple part of the diet, while across the ocean it was utilized exclusively as food for live-stock. Here squirrels were considered a table delicacy. Over

there they were a rodent, and therefore the thought of eating them was repugnant.

The sport of squirrel shooting was born of necessity, but became a pastime that gives pleasure to its devotees even today. It did much to make us a nation of riflemen. It put a clause in our Constitution, "The right of citizens to keep and bear arms shall not be infringed—." It left an indelible mark on our speech and thought.

Like most farm boys that were born in the early part of this century, I had a prime ambition to own a rifle. The chestnut trees that shaded the lane yielded an abundant harvest. The local country store paid the magnificent price of one cent per quart. I worked diligently. A calf skin and some scrap iron were bartered for half a dozen muskrat traps. The creek beyond the pasture yielded eight muskrats and a small mink. Practice in thrift and self-denial, with the help of several shrewd business deals, allowed me to arrive at a peak of wealth that permitted the extravagance of a Stevens Little Scout .22 caliber, single shot (\$3.89). This purchase bankrupted the treasury. The storekeeper trusted me to a box of ammunition (\$18).

As I rode homeward with my father, I remember tracing with my finger the lettering on the barrel. The pride and wonder of owning this weapon engraved the words on my memory: Stevens Arms Company, Chicopee Falls, Massachusetts.

The balance of the fall and winter I hunted under the strict supervision of my father. I learned that ownership carried a responsibility. He drove home the lessons on safety and maintenance with a stern discipline that left a lasting impression. He demonstrated the killing power of the weapon as we butchered our winter's supply of pork. It was a year before I was judged capable of using my weapon intelligently and given permission to hunt within the confines of the farm.

Between the woodlot that covered the north slope of the hill and the cornfield behind the barn was a rail fence that served the squirrels as a highway. Just inside the woods was a decaying chestnut stump. The shell formed a perfect blind. I rigged a seat within its circumference and spent most of my free mornings watching for squirrels. It effectually reduced the raids on the cornfield, supplied the family with squirrel for the table, and made me a proficient marksman.

Rifle hunting for squirrel is a lesson in patience and the art of being still. True, the casual hunter bags an occasional squirrel but success comes most often to the individual that practices the traditional method, still hunting.

I saw a demonstration of this fact when a young rifleman took a stand on the slope some distance below me. Within an hour he had selected and killed four young squirrels from the population that lived among the huge oaks. In his hands the .22 was deadly and efficient. Each animal dropped with a single shot.

He was field-dressing the last animal when another hunter appeared. He fired several ineffectual shots from a double that he carried. At least two of these animals were hit but managed to escape to den holes. One of the squirrels ran up a big oak and hid behind a crotch. This brought it into full view of the rifleman. Apparently disgusted at his failure, the hunter took a seat under the very tree in which the

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# The Squirrel Hunting Dilemma

By DR. HENRY S. MOSBY, *Dept. of Forestry and Wildlife*  
*Virginia Polytechnic Institute, Blacksburg*

IN several states, the gray squirrel is ranked as the game animal hunted by the most sportsmen and in other states it ranks second in popularity only to the cottontail. As a result, the timing and duration of the legal squirrel-hunting season has received more attention from wildlife managers than has been true for most other game species in many eastern states. The controversial nature of squirrel hunting is indicated by the extreme variations in the opening dates permitted by law between states (from May 15 to November 1) and even among the various counties here in Virginia.

Most wildlife biologists recommend a small-game harvesting period which permits the removal of surplus animals when the annual peak of the population is reached and at a time of year which does not conflict seriously with the reproduction period. Thus, those charged with establishing squirrel hunting seasons seek to reach a compromise between an early (September) season desired by many hunters and a later (October or following) season recommended by many wildlife investigators to minimize conflict with breeding activities. A September season would permit a greater proportion of the available population to be harvested since squirrels are concentrated around nut-producing trees such as hickory, dogwood, and beech. A later (October 15th or later) season would afford a slightly larger population, as late-litter young would be out of the nest and available to the hunter, but hunting conditions do not permit the sportsmen to remove as large a proportion of the available squirrels.

The exploitation of the gray squirrel as a game animal and the establishment of hunting seasons are intimately associated with the reproductive biology of this mammal. As a result, the reproductive attainment of this mammal has been investigated by a number of wildlife biologists. The male squirrel becomes sexually mature at about 9 months of age and probably has no period of quiescence thereafter except in September. It is generally agreed that the female fox and gray squirrels have two major breeding periods during the year. The peaks of litter production usually occur in March and again in July. However, some females show evidence of breeding almost every month of the year with the possible exception of from mid-November to mid-December. A West Virginia investigator concluded, from his examination of 3,205 female squirrels, that about 25% of the summer litters were born after July 28, and only 5.5% were born after August 8. He estimated that only about 20-30% of the breeding females produce two litters per year on the average. Under normal circumstances, the female does not produce her first litter until she is about one year of age, produces only one litter the first year but may have two litters per year thereafter. Data collected at V.P.I. and by other investigators in Ohio, West Virginia, Mississippi, and elsewhere suggests that gray squirrels average just slightly more than one litter per year.

Spring-litter size is slightly smaller than are summer-produced litters with the range in litter size varying from 2.10 to 4.10. The average litter size based on a sample of 571 records obtained in 10 eastern states and in England was 2.72.

Weaning of nestlings begins at about 6 weeks of age, but young squirrels are not completely independent of the female until they are about 10 weeks of age.

Due to the extended breeding season of the gray squirrel, the timing of the hunting season and the influence of hunting on squirrel reproduction is hotly debated. Most investigators recommend that the hunting season be delayed until October or later to conflict to a minimum degree with the squirrel-breeding activities. However, as pointed out above, any hunting season except from mid-November through December will conflict with a small percentage of the population which is showing evidence of reproductive activity. Therefore, the practical question regarding the timing of the hunting season revolves around a biological and sociological compromise between the period when sportsmen prefer to hunt, the percentage of the population harvested which is

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The timing of the squirrel season must be a compromise between the time hunters prefer to hunt bushytail and the optimum timing dictated by the population dynamics of the species.





# TO HAVE AND TO HOLD

By ALBERT G. SHIMMEL  
*West Decatur, Pennsylvania*



Commission photo by Kesteloo

**I**N the frosty half-light of early dawn, Urocyon, the fox, stole furtively through the brittle marsh and sought higher ground. He was smarting under the drubbing he had received the previous evening from another male. He was intent on leaving the territory for a place where he could hunt in peace. The brashness that had carried him safely through his adolescence was gone. In its place was a bewildering new sense of insecurity.

He was miles from the den where in early spring he had left the warm darkness for the blinding adventure of sunlight. He was the first to taste the warm flesh that Vixen brought to her young. With ridiculous, infantile growls he warned his litter mates away and appropriated the chipmunk for his own. He dragged it to the shade of a nearby bush and worried it until little remained except tattered rags of skin.

Possessing superior strength and agility coupled with an aggressive disposition he dominated his brothers and sisters. When at times they rebelled and overwhelmed him by sheer weight of numbers he used his teeth with such vigor and effectiveness that the aggressors protested vocally. When

Vixen interfered to restore peace he wandered away, resentful of authority.

The hunting instinct awakened early. Long before the others were taking notice he was leaping at passing butterflies and stalking moving shadows. Anything that stirred became a subject for his attention. His mind was alert. When he saw his mother capture a mouse among the grassy tussocks he imitated her performance and knew for the first time the fierce joy of living prey between his teeth.

Although at times he blundered, the persistence with which he hunted provided ample game to keep his hunger in check. His confidence grew with each kill, and as his skill increased he hunted farther and farther afield. He began sleeping out, hunting at dawn and dusk when other creatures were on the move. Between huntings he sought the brushy thickets and rested, unafraid. He varied his diet. He found the eggs and fledglings of ground-nesting birds. He ate crickets and grasshoppers. He caught frogs as they sat beside their marshy puddles, and even killed and devoured an occasional snake. When the blueberries ripened, he filled his stomach with luscious fruit that hung

from every bush.

As summer waned he grew in size and strength. His undisciplined freedom often led him into difficulty. He learned by experience the lessons that his mother would have taught by example. His mistakes were the price he paid for his independence.

While hunting mice at the edge of an open meadow he was skillful enough to capture three in rapid succession. The excitement of successful hunting dulled his caution. When a movement in the grass attracted his attention he pounced and grabbed a toad. His mouth and eyes were stung by the acrid, milky secretion from its skin. In his distress he rolled, rubbed his muzzle along the ground, blundered blindly through the swamp until he found water to flush his mouth. The effect of this experience made a lasting impression. In the future he investigated before taking captives into his mouth.

A week later he pinned a weasel under a clump of marsh grass, holding it down with his forefeet. As he pushed his nose close with the caution born of his previous experience the little demon freed its head. With the courage of desperation it slashed away at its captor. The needle-sharp teeth drew blood and the musk glands filled the fox's nose with the nauseating smell of fear. His eyes burned. He choked, released the small fury then leaped away. Instinctively he rubbed his burning muzzle in a nearby sphagnum bed. The cool acid moss stopped the bleeding and absorbed most of the musk. Another lesson was driven home by this experience. . . .

A hawk, riding the autumn thermals, could see the low rise covered by hardwoods that separated the watershed into two parts. On one side a marshy lake gathered the waters of a dozen springs to feed the creek that flowed south and east. Beyond, lay the swampy pools and sedgy meadows that filled the ancient beaver dams. The brown-stained water wandered here and there before it found its way, north by east, toward the river flats so far below. Not far from one of the pools Urocyon's mother had enlarged a woodchuck's burrow into a nursery. Here he had been born. He made the meadow, swamp and woods his own, and they in turn had been his home through awkward adolescence to adulthood.

Autumn touches all creatures with the urge to quit familiar summer ranges. It is a time of change. It pushed Urocyon from his hunting ground over the divide. He found a sunny slope beyond the lake—a scar left by the lumbermen but overgrown with brush and vines. Here rabbit trails were everywhere. Tart and grapes hung from the tangled vines. A short way up the slope the hardwoods, yet uncut, littered the ground with mast. Birds, squirrels and mice moved here and there, each gorging for the famine time to come.

A tuft of grass beside the brush-grown trail bore witness that another fox had prior claim to this range. In the arrogance of his inexperience and strength, Urocyon raked the ground with both hind feet, then left his challenge on the grass.

The inevitable meeting came shortly after dark on the third day. They arched their backs like fighting cats, then measured strength with strength, struggling for mastery. Finally all was still.

It was a chastened Urocyon that drank from the spring run that fed the lake. He looked across the water toward the scene of last night's encounter, then turned and followed the stream up through the hemlocks in a rock-rimmed cove.

He climbed wearily up the slope. Among the rocks he found an overhang heaped with dry leaves. He turned round and round shaping the leaves into a comfortable mattress. His salt-and-pepper coat with its buff and white markings blended with the leaves and the gray rocks of the overhang. A thin tangle of brush screened his head. He tucked his black-maned tail around his feet, surveyed the cove below, then yawned and fell asleep.

A chipmunk rustled among the fallen leaves, stuffing his cheeks with seeds of the witch hazel that grew below the ledge. A pair of mischief-seeking jays were flitting through the trees. Spying the chipmunk they swooped close and shrieked into his ear. He reacted with a spasm of fright so violent that he sought the nearest refuge. Urocyon's jaws snapped and the chipmunk was dead. The jays caught a glimpse of Urocyon through a screen of brush. They shouted and chortled. Within minutes a dozen of their prying kin had joined the mischief. Embarrassed by the noise he finally slipped away and left the noisy mob behind. . . .

As the days grew shorter the hunting along the ridge grew leaner. Urocyon gradually extended his wanderings to include the margin of the lake. The sedgy meadows were alive with mice. He fed well and put on fat. There were nights when he ventured around the lake to the very edge of the territory held by the other fox. He coveted the easy hunting but respected his rival's claims. The first contest had been enough.

Dusk came early under a lowering sky. The restless urge to feed and then find secure shelter touched all creatures. It sent the meadow mice scurrying through the network of arched runways. A great horned owl flew from the thick evergreen that had been his day perch to sweep the marsh and bring terror to the lesser tribes. A flight of woodcock, driven from the north by the approaching storm, probed the dark loam of the alder flat. Urocyon was aware of their faint musky odor but was repelled rather than attracted by it. Only the stress of extreme hunger would tempt him to hunt them.

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He found the toad not to his liking.





# POUCHY, THE POSSUM

By CARSTEN AHRENS  
*Pittsburgh*

THE opossum is a quaint but not a lovable animal; it seldom gets into print. You can think of stories about Peter Rabbit, Reynard Fox, Leo Lion and Mickey Mouse, Puss in Boots, and the Three Little Pigs: Pic, Pat, and Poo, but how many yarns do you know about Obadiah or Orpha Opossum? I have a book of fables culled from the lore of many lands; over one hundred wise and unwise animals are featured, but the opossum isn't mentioned.

Somehow the animal doesn't seem very winsome. It has

By tradition, the opossum is supposed to dine on persimmons . . .



a baggy skin more or less covered with thin, whitish-gray fur. The large, dark eyes in a pale face should make it appealing, but that isn't the effect. The feet are white, too, and the first of the five toes is clawless and is an opposable thumb, making the animal at home in trees. The long, naked, scaly tail is prehensile and acts as an extra hand while climbing. This tail and the thin ears have a frostbitten look in midwinter.

An opossum may live to the ripe old age of eight years if its beat is away from traffic lanes. Few animals seem so helpless on the highway at night. It seems petrified by the sudden appearance of the bright headlights of the cars that race down on it and all too often leave it flattened out on the pavement.

Opossums are usually nocturnal, though occasionally they are seen during the day. Early this spring, about noon on a dark, chill day here in the city, a friend called me to name the visitor at the birdfeeder. It was an opossum. The animal was crouching in the crotch of the elm immediately above an onion sack filled with suet, which it was eating avidly. When we swung open the window, the animal performed its characteristic act of lapsing into unconsciousness, and collapsed into the crotch. When I lifted it out, it maintained its angled shape as though frozen. We put the animal on the back porch and watched it through the stormdoor.

Illustrations by Karin Ahrens DeStefano

Gradually it resumed its normal shape, finally lifted its head, and sensing everything was OK, started away. At that moment, Fritz, our terrier, bounded up the porch steps. The opossum reached the edge of the porch by the stairs as Fritz arrived at the same spot. Again the opossum collapsed, mostly on, partly off, the porch and "froze" there. It reminded me of the appearance of one of artist Dali's watches: part on, part off the table.

Opossums are often closer neighbors than folks realize. This spring when I went to open camp, I found a woodchuck had made himself at home under the building by getting in through a broken trouble-door in the foundation. I had to do considerable awkward shoveling in order to crawl in to close the drainage taps.

. . . but our only pouched mammal is not very choosy. Anything in its path—seeds, acorns, bird nestlings and eggs, carrion—it's amazing how many items it finds fit for food.



When I tried trapping the chuck that night, I caught an opossum instead. As I approached the snared creature, it opened its long pointed jaws showing its 50 teeth—more than any other mammal can boast—and hissed angrily at me. When that didn't frighten me away, it "fainted." I had set two traps and each held a hind leg of the unfortunate marsupial. The animal was placed on a scale and its "dead" weight was 8½ pounds. It looked and felt heavier to me. The opossum had made no attempt to twist or gnaw its feet free from the traps, and after a short nap, it ambled off none the worse for the ordeal.

The next evening I caught a second and smaller opossum, and I gave up the game. It occurred to me that more things lived under the house than I dreamed of. Next time I might catch a skunk who wouldn't play dead, and the odor of my success might linger about camp much of the summer.

While there are many species among our other rather primitive mammals such as the moles, shrews, and bats, we have only one species of opossum in the United States. It was entirely new to Cap'n John Smith when he found it a part of the Jamestown Settlement in 1612. He wrote it resembled at once a swine, a rat, and a cat. There are several species of opossum in South America, and in Australia the marsupials outnumber in kind the other mammals and

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# The COURAGE of Wildlife

By RANDY CARTER  
Warrenton

AFTER a fairly long life in the out-of-doors I thought that I would write about a few examples of the courage of Virginia's wildlife that I have been privileged to witness.

One of my first experiences involved a groundhog, or woodchuck as some people call him. I came upon the fellow one day by walking over his den in a field and toward him as he stood up to look around. When he saw me he started toward me to get to his den, much to my surprise. I could see a certain amount of determination in his action although I was not a student of the facial expressions of groundhogs. Even though I was in the way, he obviously was not going to turn aside. He kept coming.

Having come suddenly face to face with such a small but highly concentrated piece of determination, I decided very quickly to get out of his way. This I did. He ran past me and into his den.

I do not have to wonder what would have happened if I had been in his shoes and had come upon a giant monster standing between me and my home. I fear I would have taken off in the opposite direction, deserting home and family in a mad dash for my own safety.

On numerous canoe trips over the states of Virginia and West Virginia, I have admired the courage of the mother wood duck. Without thought for her own safety she puts on a most realistic act of having a broken wing. She starts off across the river in front of our canoe, flopping along over the water with one wing hanging down making such a commotion that even the experienced canoeist watches her, forgetting to look at the brood of baby ducks from which she has diverted our attention.

Another show of great courage is given by the hunted raccoon when cornered. A coon is hunted with coon dogs. This is a wonderful night-time sport, and even if it does not end up with a coon, it gives a lot of good exercise and always some kind of adventure—perhaps getting lost in the forest or falling into the river.

The hunt ends with the hounds running a coon up a tree. They keep up their noisy yelping until the hunters arrive some time later. If the tree is too high to climb, a light is flashed on the coon and the hunters shoot him with a rifle, usually taking two or three shots to knock him out of the tree. He falls to the ground and is immediately set upon by the hounds. The hunters beat the dogs off to save the skin from being torn up.

If the tree is small or easily climbed a hunter climbs up after the coon, forcing him farther and farther out on a limb. Then the hunter shakes him out of the tree, and he falls into the waiting and yelping mouths of a pack of vicious hounds.

Somehow he often gets back to the tree and, with his back against it, makes his stand against odds of five or six to one. There standing on hind legs, front paws outspread and claws extended, he makes his stand and fights off the hounds as they yap at him, waiting for a chance to close in.

Anyone with good sense would give up and die, but not this coon; he is going to die fighting. It is a display of courage against great odds that has brought tears to many

strong men's eyes. The strong man says, "call off the dogs. Anyone who puts up a fight like that deserves to live." But often the hunter raises his gun and shoots the coon, the sorry reward for a gallant stand against great odds.

Another instance of wildlife courage that I shall ever remember took place during a bird hunt. We hunters were walking thru open woods, when a large hawk was seen circling overhead. My father shot, and it fell somewhere ahead of us. We entered an open space in the woods. There on the ground in the center of the open area was the hawk. He was standing up, one wing broken and hanging down. He looked defiantly at us as we came into the clearing. Then with his good wing partly extended he walked straight toward us to do battle. Apparently he hadn't considered running away. He was going to die a hero's death, sword in hand, and meet his deadly enemy face to face in mortal combat.

There was nothing to do but shoot him since he could not  
(Continued on page 22)

He doesn't go looking for trouble, but when cornered away from his den he will stand his ground and fight for his life.

Commission photo by Kesteloo



Randy Carter is author of the "canoeist's bible," *Canoeing White Water*, now in its 5th revised and expanded edition. The book covers the white water rivers of the whole state of Virginia and includes information on fishing these rivers, and locations of camping areas and boat landings.





# Birds and their names

By ILEEN BROWN  
South Boston

In the west, along rivers, cliff swallows build their nests in colonies of hundreds. While they seemingly practice togetherness they apparently like a certain amount of privacy, for each nest has its own private entrance.

When we notice some birds' behavior, it is easy to understand how they came by their name. One of these is the kingbird, who will attack crows, hawks or other enemies that dare invade its territory. Because of this trait poultrymen have found the kingbird helpful to have around.

The kingbird hasn't always been so well received. At one time it was believed they fed mainly on honey bees and for this reason they were often called bee martins. Now it has been proven that they eat mostly harmful insects, beetles, wasps, wild bees and ants.

The belted kingfisher is another bird whose name speaks loudly. This talented fisherman will fly over shallow water until he spots a school of fish. He picks out his prey and then plunges into the water after it. He takes the fish to a convenient spot, pounds it motionless, and then swallows it head first.

Our own mockingbird needs no explanation on how it came by its name, for this bird, so like a naughty child, will mimic everything from other birds' songs to noises of our human world. A friend tells of one mockingbird who kept a household in a state of confusion.

A member of the family was ill on the second floor. For conveniences she had a bell she would ring when she needed something. For awhile everything went along smoothly and then the bell was ringing almost constantly, only the patient denied she was ringing the bell. After some deliberate sleuthing the culprit was found perched on a limb of a nearby apple tree.

The Nashville warbler, Tennessee warbler and Cape May warbler—each tell us where they were first discovered. The Lewis and Clark expedition added the Lewis woodpecker and Clark's nutcracker to our bird list, and Audubon named Bell's vireo after a taxidermist. The weaker sex wasn't slighted completely when bird names were handed out. Lucy's warbler and Virginia's warbler each were named for lady friends of their discoverers.

Often birds' technical names are replaced with nicknames. The towhee is known only as the ground robin to many; red-winged blackbirds as swamp blackbirds; the nighthawk as the bull-bat; and cedar waxwings as cherry birds. Golden winged woodpecker, yellow hammer, wicker—all refer to the flicker.

The bobolink is known as the reedbird or ricebird in the Middle States, where they gather in reedy marshes and feast on wild rice. At one time, when some of the more southern states devoted much of their low marshy shores to rice culture, bobolinks were a threat to the rice crops. In the spring they brought ruin to the sprouting grain and again during fall migration when the grain was ripening.

IT is said that our bird vocabulary is taken from twenty-five or more languages ranging from primitive tongues to Greek and Latin. Martin Grant, an American ornithologist, estimates that almost one quarter of 446 English names of birds have come from other languages, while the remaining names are derived from the bird's call or song, nesting habits, behavior, or the locality in which the bird was first spotted. And still others are named for their discoverers.

Our well known robin was given its name by the English when they settled our American shores. The name was taken from their own popular English robin, which is a smaller and more aggressive bird.

Many birds call their name. We only have to listen to know this is true. Probably the most well known are the bobwhite, chickadee, pewee, phoebe, killdeer, flicker, whip-poorwill, and chuck-will's-widow.

Nesting habits also play a large part in bird naming. The chimney swifts, who ingeniously snap off dead twigs with their feet and then glue the sticks together with saliva to form a bulky platform nest, are a common addition to our chimneys during the spring and summer months. While we may not be aware of them during the incubating period, it is almost impossible to ignore the young as they call noisily for food, or the occasional bird who loses its footing from the chimney wall and falls into our midst.

The barn swallow, cliff or cave swallow and bank swallow—all tell us by their name where they are found. For many of us a colony of barn swallows is considered a good omen. Swallows are almost always in constant flight. They catch their meals of insects on the run, and they swoop low for sips of water from ponds while still on the wing. Although swallows are considered songbirds, the barn swallow is perhaps the most gifted. Its soft warbling on a warm spring day is delightful.



# CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

**VIRGINIA WARDENS AMONG TOP IN NATION.** With an average of 68 arrests per man, Virginia's Game Wardens were among the top three in the nation in efficiency, according to a survey just completed by the Wildlife Management Institute. Oregon with 99 arrests per man and North Carolina with 69 arrests per officer topped Virginia's record. Virginia's 116 man warden force was below the average number for southeastern states where officers per state varied from 43 to 314. The 352 square mile average patrol area of Virginia wardens was a little below average for southeastern states where officers' territories varied from 202 to 839 square miles. Virginia's record of 10.5 persons arrested per thousand licenses was a little above the average for the Southeast and much above the national average.

**VIRGINIA SETS DOVE, RAIL SEASONS.** Virginia hunters will get a little earlier crack at doves this year with a season set to open September 7. The first portion of this split dove season will end November 2, and the second portion will extend from December 16 through December 28. The daily bag limit will remain at 12, and shooting will be limited to hours between noon and sunset, prevailing time, whether it be daylight saving or standard. The extra week at the start will allow hunters to be afield when the greatest number of birds are present, but harvested fields necessary for good shooting will be scarce.

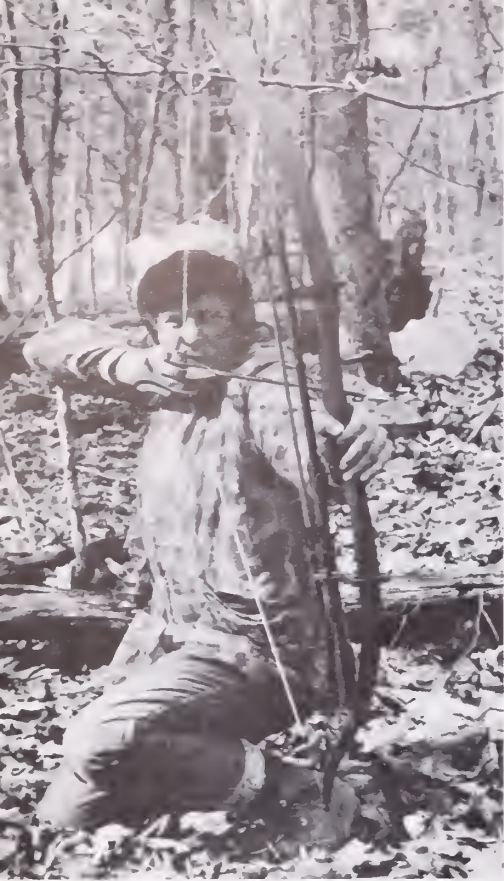
Rail season will open September 6, coincident with unusually high tides along the Virginia coast, and close November 14. A bag limit of 15 clapper or king rails daily is unchanged from last year, but the daily limit on sora and Virginia rails was raised from 15 to 25 daily.

Woodcock and snipe seasons will open November 18 with most other hunting seasons. Snipe season will end January 6, and woodcock season will extend through January 21. Bag limits are 8 snipe and 5 woodcock daily. Shooting hours on all species except doves are one-half hour before sunrise to sunset each day. Gallinule season dates and limits will be set in August to conform with seasons for other waterfowl as was done last year.

**\$6,758 PAID TO COUNTIES FROM GAME COMMISSION TIMBER SALES.** The Commission of Game and Inland Fisheries made payments of \$6,758 to 13 counties, representing 25% of the net timber sales from Game Commission lands during the past fiscal year. This makes the sixth year that such payments have been made to counties in which game management areas are located as a reimbursement for lost taxes.

During the six-year period the Game Commission has grossed \$129,217 from timber sales on all wildlife areas. Except for the amount paid to counties, the net proceeds have been used in maintenance and improvement of these areas. Timber harvest is carefully planned to provide maximum benefits to wildlife.

County	Net Sales	County Share
Alleghany	\$484.21	\$121.05
Amelia	766.36	191.59
Augusta	1,545.00	386.25
Bath	3,104.05	776.01
Greene	1,322.52	330.63
Highland	517.90	129.47
Madison	11,933.70	2,983.43
Powhatan	1,079.16	269.79
Roanoke	34.60	8.65
Rockbridge	1,675.75	418.94
Russell	730.52	182.63
Smyth	3,820.14	955.04
Washington	20.78	5.19
Total	\$27,034.69	\$6,758.67



# FALL FEA

## FOR THE BOWI

**P**ERSONS who hunt with bow and arrow will have a variety of opportunities this fall to improve their skill and test their marksmanship and have fun while doing it, thanks to the efforts of the Virginia Bowhunters Association and local archery clubs. The big events are the Bowhunters Jamboree at Wytheville September 14 and 15, and the Annual Broadhead Shoot at West Point October 6, but a number of local archery clubs have programs planned for the bowhunters prior to the opening of the bow season.

The Bowhunters Jamboree is the largest, oldest and most varied event for bowhunters in the state. It is held on the Wythe Bowhunters Range 8.5 miles north of Wytheville. Moving, life-like three-dimensional animal targets are one of the favorite attractions, especially the running deer which bounds up and down a 100-foot course. Native Virginia game animals in natural settings are features on one 28 target range. An official 56 target animal round will handle competition for trophies in regular National Field Archery Association classes.

Targets will be running and ranges will be open Friday night for early arrivals. On Saturday night there will be animal calling and many other contests, plus hunting and wildlife movies. Door prizes will be given Saturday night and Sunday. Good shots or lucky archers will carry home over \$500 in prizes. The annual V.B.A. big buck contest will be held Sunday afternoon. Any deer killed with bow and arrow in the state last season is eligible.

The Game Commission, National Forest, State Division of Forestry, and Virginia Wildlife Federation all have displays and personnel who assist in the program. Local Game Wardens have been active in promoting and helping with the jamboree. All archers are welcome. No club or organization affiliation is necessary to join in the fun. The program is designed to provide all phases of archery including tournament, hunting, and fun with emphasis on conservation, skill and safety.

Manufacturers and archery dealers have elaborate displays of archery equipment at the jamboree, and tackle trading is getting to be one of the big attractions. Manufacturer's seconds, discontinued models, special lots of merchandise, and used equipment allow the bowhunter to outfit himself with the best at moderate cost.

Camping is available on the premises with water and toilet facilities conveniently located. Dark Horse Hollow, a Jefferson National Forest Campground, is located one-fourth mile from the Jamboree Headquarters. Motel accommodations are available within three to five miles. Food and refreshments will be available on the grounds during the event. Archers are advised to bring field points, broadheads and blunts as shooting opportunities will be provided for each.

The State Broadhead Tournament at West Point, recognized officially by the V.B.A. for the first time this year, features 28 dirt-backed life size deer targets. The range is



The official Virginia Bowhunters Association Broadhead Tournament at West Point gives archers a chance to try out their hunting shafts on 28 realistic deer targets. The course is laid out to simulate actual hunting conditions including intervening brush, limbs and trees and shots from tree stands.





# TURES

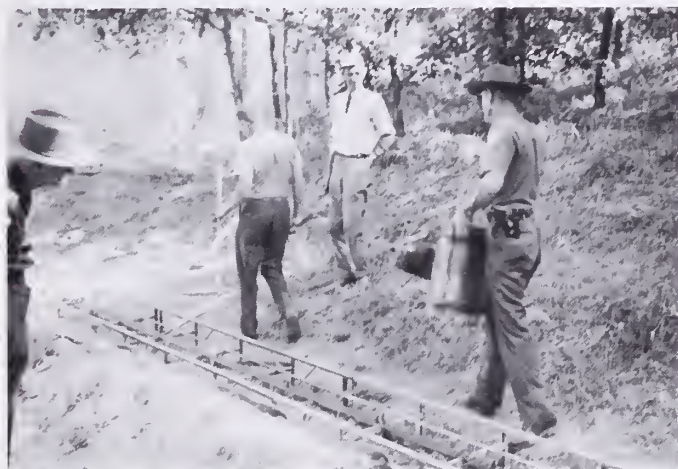
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laid out to simulate the normal hunting conditions including overhanging limbs, dense timber and open field shots. Tree stands are incorporated for added realism. Actual broadheads are fired at the targets and participants are urged to bring pliers and knife for extracting the hunting blades from trees which get in the way.

Handsome trophies are awarded to the top shots. Participants are allowed to shoot the range more than once. The tournament is held in a wooded sand pit area some three miles south of West Point on Route 33. Camping is permitted on the premises or at nearby Upper York Campground on Route 600.

The Richmond archers will hold their second Bowhunters Seminar at their Izaak Walton Park Range near Midlothian September 8. The Northern Virginia Archers of Fairfax and several other Virginia clubs plan similar events prior to bow season. Watch local papers for exact dates.

The Richmond Bowhunters Seminar to be held September 8 will include instructive sessions on shooting techniques, selection of equipment, hunting methods, game laws, safety and hunting opportunities in addition to plenty of actual



Greear Studio photo, Wytheville

Game Wardens R. M. Wolfenden, left, and R. G. Mitchell give the Wythe Bowhunters a hand in readying one of the moving targets featured in the Bowhunters Jamboree.

shooting. A 14 target broadhead range will be outfitted with life-sized deer targets in natural settings. Tree stands and other realistic shooting situations have been incorporated. A running deer target will provide some practice for this different type of shooting.

One of the 28 target field ranges will feature official N.F.A.A. animal targets. Camping is permitted at the range and refreshments will be available. Other local club events will be similar.

All of these events are presented for bowhunters as well as members of organized archery clubs. They are conducted for the improvement of bowhunting as a sport and for the enjoyment of those who like to hunt with bow and arrow. No membership in any organization is required to participate.

Bowhunters' seminars held by the Richmond archers and other local Virginia clubs give bowhunters realistic hunting practice with actual hunting equipment, plus a wealth of information on how and where to hunt for best results. Sessions include tips on selecting equipment, demonstrations of hunting equipment bowhunters can make for themselves, and a run-down on safety and game laws.





# Pines Join the Procession of Progress

By EDWARD S. CROSS  
*Budd Lake, New Jersey*

**"D**ID you ever stop to consider the effect of the population explosion on the breeding of pine trees?"

It was my son, Bill, who had asked the question.

Population explosion! Breeding of pine trees! "What in the world is the connection?" I wondered.

We were riding together last year in Virginia's tidewater country—the land of the three P's: pigs, peanuts and pines. Since Bill is a state forester, his interest, naturally, is in pines.

I pondered the question for a moment before venturing a reply. "I suppose the mushroom building of new homes in every city, town and hamlet across the country calls for more lumber."

"Yes," Bill replied, "lumber demands are increasing and look at all the new uses for paper: double-lined paper sacks for groceries at the supermarket, milk in paper cartons instead of glass bottles, paper napkins and paper table mats instead of linen, paper towels at the kitchen sink, paper tissues for Junior's nose. All this means more pulpwood for the paper industry; much of our timber harvest goes to that market. But that's not all; there's always a top market for high quality trees for piling. Here in Virginia we realize that we must assure an interested landowner that the forest he regenerates and in which he invests will be attractive to the entire pine wood industry."

"But you said 'breeding of pine trees.' Don't trees just grow like Topsy?" I asked.

"Perhaps they used to," Bill answered. "For generations we've been stupid enough to cut the best timber and leave the runts to perpetuate the race. Now we're waking up. We've got to raise more and better trees on less land and raise them faster to meet the increasing demands of an ever increasing population."

"So how do you go about it?" I asked.

Bill went on to explain the program. The Commonwealth of Virginia made its start in 1960. Some of our other states, particularly in the South, and some of the larger paper industries are working along the same lines. The first step is to find a limited number of suitable "parent" trees. By grafting young growth from such trees into run-of-the-mill infant stock the hereditary characteristics of the "parent" can be controlled and vastly multiplied.

Virginia's predominant pine is the loblolly, and the state's Forestry Division has picked forty trees of this variety from the millions in the state, twenty from the sandy coastal plain and twenty from the clay soils of the central Piedmont. On a smaller scale a limited number of trees have also been selected from the shortleaf, Virginia and white pine species.

These selected "parent" trees must meet very rigid standards: they must be straight with no spiral growth and with a minimum of taper. Branch structure is important; the smaller the diameter of the branches and the nearer they come to growing straight out from the trunk the less will be the detrimental influence of knots in the ultimate timber.



The crown, or top, should not be too large in proportion to the rest of the tree. It must have grown as fast as or faster than any of the five most favorable of its immediate neighbors.

Bill turned off the main road and down a private lane with an open field at our left and a wooded area on our right.

"Even when we find a qualifying 'parent' tree," he said, "we have to have the cooperation of the owner before we can use it in the program. So, you see, a good standard of public relations is important."

We stopped, shut off the motor and climbed out of the green State Forestry truck. Bill held the strands of barbed wire apart while I crawled through the fence and we proceeded a short distance into the woods.

"How does this one shape up?" he asked.

It seemed to me to meet his specifications, but Bill's critical eye was not satisfied with the crown. After I had flunked a couple more he pointed out a well-formed tree with a white band painted at breast height. The trunk had a larger diameter than any others in sight and was as straight as an arrow all the way to the crown.

"That band gives it away," I exclaimed. "I'll bet that's the perfect tree you wanted to show me."

"Well, not perfect. We haven't yet found a perfect tree. But this is one of the choice selected 'parents' we're using."

"But one thing puzzles me, Bill. How do you know that this tree grew faster than any of its good neighbors?"



"That's easy," he replied. "We check them all with an increment borer; I'll show you one when we get back to the truck."

This tool of the forester's trade is a type of drill with which a boring may be made into the tree trunk; instead of spewing out the borings, it forces them into a plastic tube, and the yearly growth rings can be counted and studied to determine the actual amount of growth in each year.

We returned to the green service truck and as Bill drove on to his objectives of the day, he explained a little more of the program. Twigs, or scions, as they are called, are obtained from the "parent" tree, packed in dry ice and sent to the Forestry Center where they are kept in deep freeze until the graft is to be made. Severing these scions from the superior tree is an interesting operation. It is done in February when the tree is dormant, and a good marksman with a rifle is the artisan. New growth in the crown of the tree is the best source; rifle shots straight up the tree trunk can sever medium-sized branches from which a considerable number of scions may be obtained. Sometimes the tree has to be "trimmed" by shooting away lower branches lest they catch and hold the choice cuttings.

Young trees put on their greatest growth in the early spring, and the actual grafting process is crowded into a single month from mid-March to mid-April. By this method the parental characteristics may be transmitted to an unlimited number of seedlings. This young grafted stock is transplanted to a seed orchard maintained exclusively for the production of cones from which seed may be obtained. Such seed will produce a new generation perpetuating the quality traits of the "parent" tree. With this increased source of high grade seed and seedlings, larger acreages of superior trees can be set out.

I was visiting Bill again in late March this year. Since it was just the busy grafting season we decided to drive up to the Forestry Center for a visit. There I met Ron Wasser, the Department Forest Geneticist, and his assistant, Bill Apperson, who were both most cooperative. The center comprises over 800 acres, only about half of which is currently fully developed.



Loading bundles of year-old pine seedlings on trailer.

On our way out to the seed orchard and the grafting beds, we passed a team of a dozen or more men and women harvesting the annual crop of year-old seedlings which are sold at nominal prices to woodland owners in the state to encourage reforestation. These baby trees are grown from seed; eight closely set rows are separated by a foot or more to permit a tractor to straddle the growing seedbed. Some of these strips had already been undercut with a plow-like knife, and the harvesting crew were pulling the seedlings by hand and loading them on a large flat tractor drawn

trailer.

At the edge of the seed orchard was Bill Apperson's field office. He took us out to a greenhouse where about 2,000 potted white pines were in the process of physical recovery from their grafting operation. Then he showed us the deep freeze unit where hundreds of small plastic bags of frozen scions were being held for their forthcoming surgical experience.

Just at this point Ron Wasser drove up and after formal introduction, he led us out to the grafting beds. Ordinary year-old seedlings had been set out last year at about two-foot intervals, and these prospective fledglings were now about two feet high and ready for the big transformation in their lives. From a distance I was attracted by a long silvery streak, sparkling in the bright sun. As we drew closer, I saw that most of two or three rows of seedlings had been encased in aluminum foil; in addition to this, the little trees of several other rows were capped with brown paper bags.

"I suppose that capping is for protection," I remarked to Ron, "but why the two types of covering?"

"The paper bags cover grafts we made a week or more ago," he answered. "Now the days are getting warmer and we are using the foil to reflect the stronger sun; it gives better protection against evaporation in the warmer weather."

Four girls were busy at the grafting, and an older man was setting up stakes and the protective coverings. Two of the young women were on their knees and two were sitting on the ground. I stepped closer to watch the process. First the stem of the seedling is slashed near the top with a long cut of four or five inches. Then a scion of almost identical

Left to right: Grafted two-year-old trees protected by paper bags and aluminum foil; workers in the grafting bed; and the author examining a completed graft while the "surgeon" performs her next operation.



diameter is whittled to give two long flat surfaces that will match the cut surfaces of the seedling. Careful examination of these cuts shows a pale green tissue just under the tender bark and surrounding the woody stalk; this tissue, called cambium, is the growing tissue. The better the match of this vital growth in both sapling and scion the better the chance of success in the graft. When this match is made to the satisfaction of the "surgeon," she seals the splice with a rubber tape, attaches an identification tag to the patient, makes an entry in her notebook and moves on to the next tree.

"Our grafting success varies by personnel and species grafted," Ron said. "We'll average about 85 percent success with our loblollies and even better with the white pines. It takes these girls about five minutes to make a graft; with four working that means about fifty an hour or close to 400 a day. They really have to keep busy to finish off ten thousand in the month we figure to get the job done."

"Do they sit out here in the rain or do you just lose out if bad weather sets in?" I asked.

Ron pointed down to the end of the field where I saw a plastic portable tent, perhaps twenty feet long. "If it gets too bad, we can move that shelter up and give them some protection," he said.

In a few weeks, when the graft has fully healed, the lower branches and even the original crown of the sapling will be cut away leaving only the rootstalk and the new grafted top which will absorb almost all the nourishment produced by the root system. This fall when the trees are about two and a half years old they will be carefully dug up with a ball of earth and transplanted to their permanent home in the seed orchard. Here a special pattern is worked out to make sure that no two trees from the same "parent" are within a hundred feet or more of each other; this guards against inbreeding. General spacing in the orchard is at twenty-foot intervals. The orchards are fertilized twice each year and are carefully sprayed for insects to assure maximum flower production. Forest fire prevention is also an absolute necessity. Grafted trees that fail to live up to the anticipated hereditary influence are eliminated from the program.

Ron explained some of the complicated studies that are further being made; cross-breeding pollination tests of every sort are tried out, and the details become so involved that computer calculations are made to unravel and explain the results.

"But tell me, Ron," I asked, "when will all this pay off? Won't it still take fifty to eighty years before your super trees will really reach maturity?"

"In the southern pine area," he answered, "maturity is usually reached in not more than forty-five years. You'll remember one of our selective standards is rapid growth; with this trait alone, we feel we can attain maturity for these trees in about thirty-five years. Our seed orchard will be producing genetically improved seedlings on a commercial basis by 1971. If this stock is planted then, we'll have an excellent stand ready for harvest by 2006. A run-of-the-mill planting at the same time will take an extra ten or fifteen years to mature and will be of poorer quality."

It is obvious that in a few more years the state's reforestation program will be utilizing a much higher percentage of top quality seedlings. Trees grown from such stock will not only mature more quickly, but will be of higher quality and of much more value than trees whose heredity has been left to chance.

## *It's the Shenandoah for me*

By DOROTHY E. WARREN  
*Front Royal*

**I**T is summer here in northern Michigan as I write this in our log cabin on the edge of a small inland lake, but my thoughts are drifting back to the Shenandoah river.

Just recently my husband and I moved from Michigan to retire in Virginia. We plan to go back to the cabin for the summers. Don't ask why we chose the Old Dominion state to retire in. That's another long story. We'd looked forward to exploring the Shenandoah—which is a stone's throw from our back yard—but didn't get to it until this spring.

It was thrilling to motor slowly along the meandering river, with the sun on our backs and a blue sky overhead, wondering what was beyond the next bend, and the next, and the next. I liked the closeness of the green, shady banks hedging me in as if for my protection. Placid-looking cows, standing knee deep at the river's bank, added to the peacefulness of the surroundings along with the contributions given freely by the birds.

Before starting on our journey, my husband had rigged up a four-tine pitchfork in front of the propeller, securely clamping it around the lower unit of the motor, thus protecting the propeller from the lurking rocks.

It was with great enthusiasm that we'd slide our twelve-foot aluminum rowboat first in one likely spot and then another to try our luck at fishing in our adopted state. We concentrated on the North Fork. One of our favorite spots is about five miles west of Riverton just above a small dam. We anchor out in the middle and let our lines, baited with gobs of fat, juicy worms, float toward the crest of the dam. I especially enjoy that good-to-be-alive sound of the water rushing over it.

Fishing one of our favorite spots, above a small dam about five miles west of Riverton.





The little clearing, like a park, on the stretch of river where the bullheads bit until after dark.



I remember one particularly perfect day in June at this place when the smallmouth bass were eager for our bait and fighting mad when caught. In past years I always enjoyed fly casting for bass. But now I changed to a spinner rod and reel, and liked it better. Moving down immediately below the dam, we encountered scrappy bluegills which were equally exciting to catch. Our dog, Sandy, who also likes to fish, was as excited as we were.

By the way, our dog, a ten-year-old orange and white Brittany spaniel, is more of a fisherman than a hunter. Show her a gun and say, "Wanna go huntin'?" and she'll hide in a corner. But show her a fishing rod and say, "Wanna go fishin'?" and she'll bark to high heaven in anticipation. She loves to watch us cast out the bait. She'll leap up on her hind legs, give a sharp yelp and snap her head forward as the line whips out. Then she'll sit as still as a rock, keep-

ing her eyes fixed on the line as if hypnotized until she can follow it being reeled back in. She never tires of this game night or day. There's never a dull moment for her while fishing. And this is all right with us because it's our kind of dish also.

One day, a little ways above the dam, we found a large opening on a low sloping bank. Here is a cleared area where couples come to picnic and swim. It is almost like a small park. Luckily there was not too much litter about—just brown paper lunch bags that took only about five minutes to clean up.

It was 2:00 p.m. when we found this spot, just above a riffle, and by 3:00 p.m. the bullheads began to bite and were still at it when we had to leave, a little after sundown. We hated to go but we made up for it one other warm June night.

We'd found a perfect spot on a bank near a bend in the river, between the dam and the small park, where we could cast without interfering branches overhead. After we'd built a big bonfire, we settled down for some more bullhead fishing. As the night wore on—with the fireflies blinking in and out like sparks thrown off from the fire—the fish got bigger and bigger until finally a three-pound eel put the grab on my line. *This* was a new experience for me. I wasn't used to the feel of such a writhing mass at the end of my pole. It felt like a ten pounder. We left with a heavy creel by midnight. We call this spot Bullhead Bend. Ah, "what is so rare as a day in June"—on the Shenandoah!

Speaking again of bullheads, for a minute, I know there are those who wouldn't eat them, or eel, if they were starving to death. But I don't see how one can resist the sweet, meaty, boneless flesh fried in flour and butter. And they're supposed to be very nutritious too. Just throw 'em *my* way, brother!

On the small lakes, which we preferred to fish in up north, the picture, however beautiful, is always the same. But on the river it is always changing as you move from one end to the other. So you can see why my thoughts are drifting back to it and why I'm looking forward to returning in the fall. You can have your lakes in Virginia. The Shenandoah is for me!





## Blacksburg Ranger District

(Continued from page 7)

portion of his work is directed toward wildlife. Deer, bear, turkeys, squirrels, grouse and quail exist on the unit and provide hunters with some excellent hunting. To insure sustained annual "crops of game" to be harvested, numerous activities are essential.

Throughout the years wildlife openings have been established. Originally these were clearings which were bulldozed and seeded to clovers and grasses. More recently, however, old trails and roads have been daylighted (timber removed on each side) and have been seeded with grains, grasses, and clovers. These are not only much less expensive to establish, but also provide more "edge" for wildlife, thereby serving more animals and birds. Some other openings have been established using herbicides to kill off old growth scrub areas and allow more desirable species to take over.

Maintaining roads and hunter access trails is a big task, even if other activities were not being pursued. Just think how much work is involved in keeping perhaps 25 miles of trails open for easy access!

It should be mentioned that the Blacksburg Ranger District includes much more than the Big Stony and Dismal-



Stony Creek, popular trout stream from which one of the wildlife management units got its name.

Nobusiness Units. In fact, a large percentage of the National Forest land within the District lies in the vicinity of Montgomery County, where through cooperative efforts of the U. S. Forest Service, the Commission of Game and Inland Fisheries, and the Blacksburg Fish and Game Club, a number of areas have been cleared, prepared and seeded in the Craigs Creek and Poverty Creek regions. With such encouragement and assistance, both manual and financial, from a sportsman's club, how can we fail in our game management efforts!

Let's now direct our attention to the other unit, the Dismal-Nobusiness Unit, in western Giles County. This area is unique in that it is interlaced with old logging roads and skid trails of past years. One would think then that this would be a very easy country to hunt. Even though you might not get lost here, you can ramble around for quite a while before you find your way out! You could be like

Daniel Boone, who said he was never lost but was badly confused for weeks at a time! You probably wouldn't walk over  $\frac{1}{4}$  mile until you found a trail, but I can assure you that every trail does not necessarily "lead directly home." Furthermore, you are apt to walk miles only to be confronted with a rhododendron thicket so dense that even a bear has to use low gear to get through!

Fires and logging activities have made this an area of relatively young timber. Thus it is an excellent deer and grouse section, but is just now approaching suitable range for turkey. Bears find the thickets inviting and you might occasionally encounter one. Hunting is quite good on this unit, which is probably one of the more popular deer hunting areas in southwest Virginia. Grouse hunting is fair normally, but fluctuates, having its "ups and downs." Turkeys are not yet well established here but the country is just now "getting right" for them. Rabbits are plentiful, if your dogs can get through the thickets to push them out. Squirrels are plentiful and provide fine hunting. A small elk herd exists, but there is no open season on them. They have practically deserted the management unit, and much to the displeasure of the Game Commission and the Virginia Penal Department, they have decided to call the Bland Correctional Farm home. This lies adjacent to the management unit in Bland County. The few remaining animals have been very destructive to the crops at the farm and thus have become quite a problem.

Fishing is quite good on this unit. Both Dismal and Nobusiness are excellent trout streams. The influx of fishermen attest to this! The streams are generally difficult to reach and difficult to fish due to the heavy brush along the streams. But many fishermen are willing to give 'er a try each year.

With the Appalachian Trail crossing this area, it is naturally popular as a hiking area. It is equally popular with the nature enthusiast since there is such a wide variety of fauna and flora. You name it and hunt for it and you will likely find it somewhere on this unit!

Campsites have been established throughout the area, mainly for hunters and fishermen and the Walnut Flats picnicking area has provisions to accommodate several families on weekend picnic trips.

In order to provide and maintain such an area for the public, much work is required. Fortunately, the game manager works like he is fighting snakes. (As a matter of fact, he does this too, along with his work.) But it takes this kind of worker to keep ahead. The big job now is maintaining established developments. Over 20 miles of trails and logging roads have been seeded, and must be mowed, brushed out, and periodically renovated. The same is true for perhaps 100 wildlife clearings which have been established in past years. Then there is road maintenance, removing brush from access trails, perhaps 25 miles of them, constructing and maintaining water holes for wildlife, cleaning up campsites and picnic areas after inconsiderate visitors depart, construction of bridges, painting boundary lines, stocking fish, operating deer checking stations, patrolling for game and fish violations—the list is endless. We are fortunate in having dedicated game managers who take pride in their work and enjoy doing their best to provide recreation for the public.

If you want to visit an area which is unlike all others you have visited, then plan a trip to the Dismal-Nobusiness Unit.

Details regarding both the Stony Creek Unit and the Dismal-Nobusiness Unit may be obtained by writing the District Ranger, U. S. Forest Service, Blacksburg, Virginia.



## The Squirrel Hunting Dilemma

(Continued from page 5)

actually breeding, the mortality of nestlings as a result of hunting and, in the final analysis, the total impact of hunting on the population dynamics of the gray squirrel.

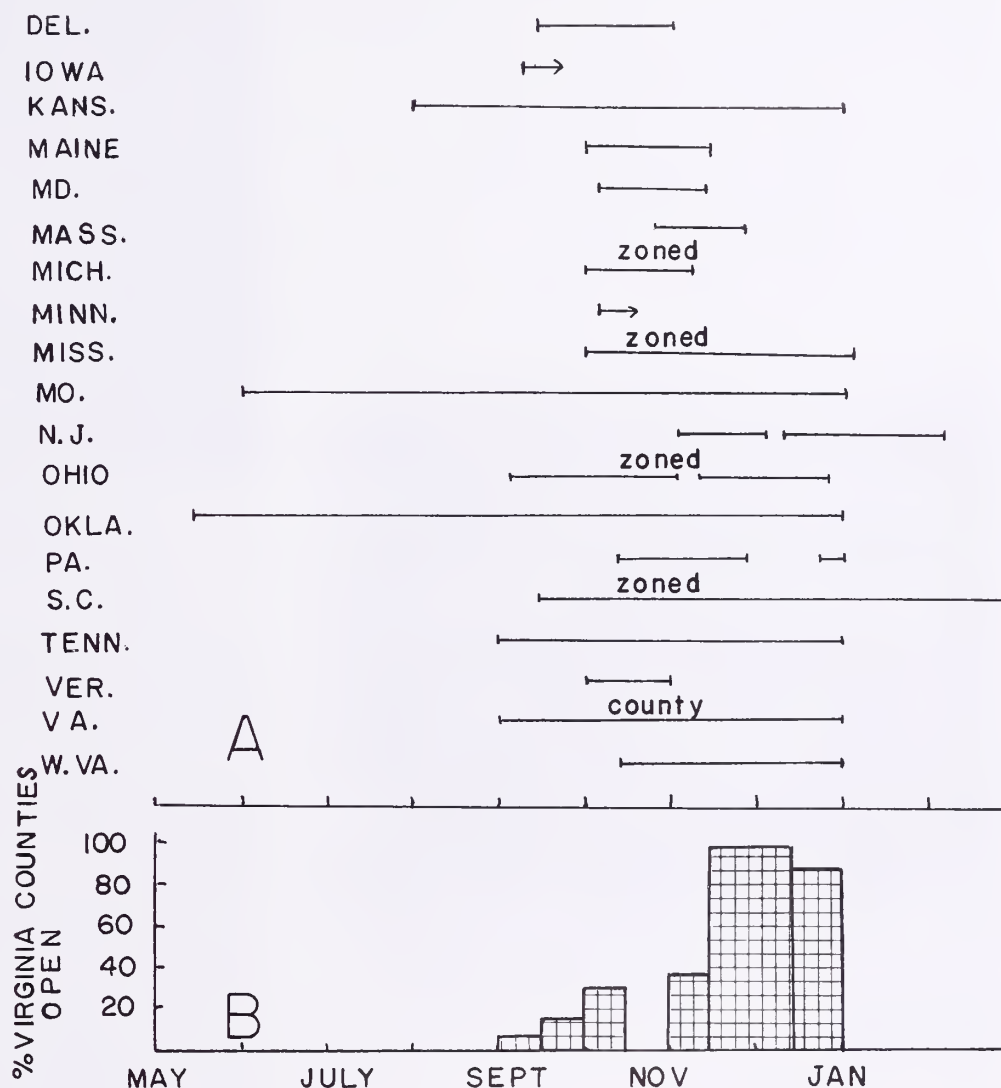
Many Virginia squirrel hunters prefer the September hunting season because it is a pleasant time of the year to hunt and because they think that hunter success is greatest during the mast-cutting period. However, September squirrel hunting is legal in less than 30% of the Old Dominion, with these open season counties scattered throughout the state. To further complicate the situation, landowners are permitted to shoot squirrels at any time of the year, this regulation being designed to permit farmers to protect

(1) that an average of 13% of the squirrel population was bagged by hunters; (2) that 65-75% of the kill was bagged during the first of the four weeks of hunting; (3) that a season of over two weeks in length adds little to the total kill; and (4) that only 3% of the annual kill in West Virginia was harvested in the last week of the 4-week season. He concluded that underharvesting rather than overhunting appears to be the problem in extensive forested areas.

In Florida it is thought that more than 50% of the gray squirrel population "... may be taken by hunters without damaging the reproductive potential of the squirrel for the coming year." In Michigan, two investigators report that squirrel hunters "... have apparently removed up to 60% of the population over a period of years without materially

CHART I

The opening of squirrel season in various states. Some states, such as Oklahoma, begin their squirrel season in mid-May. Missouri starts squirrel hunting in June and continues the season through December. Here in Virginia it is not until mid-November that squirrel hunting is legal throughout the entire state.



their crops from squirrel depredation.

There is a growing realization that hunting of farm game frequently is self-regulating, that hunting pressure is greatest at the first of the season and over holidays, and that as hunting success diminishes, hunting pressure decreases. These general principles appear to hold for the gray squirrel. For example, hunter surveys in Ohio determined that the squirrel hunting pressure was greatest at the opening of the season (September 1-15) when more than 50% of the hunter-contacts were recorded in the first 10 days, but that hunter-success remained fairly constant throughout the 50-day season.

Uhlig, who studied squirrels extensively in West Virginia, summarized his data on the impact of hunting by stating:

reducing the reproductive potential of this population." At V.P.I., about 40% of a woodlot squirrel population was removed over a 6 year period of study without adversely affecting the population dynamics of this group of squirrels. Thus, where squirrels have been investigated intensively, overharvesting has not presented a problem. In fact, the Virginia, West Virginia, Mississippi, Michigan, Ohio and other studies would indicate that the squirrel population in extensive forested areas is undershot, whatever the beginning or duration of the legal season.

Game crops are produced annually and if the removable harvest is not taken by sportsmen, it is lost to natural causes. Are we underharvesting our squirrel crops due to the complexity of our Virginia squirrel hunting laws?

live with a broken wing—a sad reward for such bravery.

The skunk is in a class by himself when it comes to disregarding danger, or he just doesn't give a darn. One day while walking down a path in the woods I came face to face with a skunk (polecat many call him). I thought he would be afraid of me, step aside, and let me by. But no; he stopped right in the middle of the path and watched as I came closer. Then he turned around and put up his tail, ready to fire.

I backed up, and he came on down the path while I got out of his way. He almost said, thank you, the way he looked as he went by. He just gave me to know that he was not accustomed to stepping aside for anybody. He had the most effective weapon, expected me to know it and politely to step aside for him. When I did, his look said, "Thanks, but you should have stepped aside in the first place."

Then there was the American bald eagle which I came upon while flying in my "putt-putt" at 2,000 feet one morning. At first I noticed something flash by. Thinking it was a buzzard I turned around to give chase, as I had often done before in my little low-speed plane.

I soon overtook the object of my curiosity. It was a great bald eagle—his noble white head and white tail bright in the sunshine, the earth far, far, below him. I throttled back as much as I could and flew just above him, about 100 feet



Commission photo by Kesteloo

The skunk is in a class by itself when it comes to ignoring danger.

off to one side.

The eagle took not the slightest notice of my relatively tremendous flying machine that roared so noisily beside him. He kept on his course without acknowledging my existence. Then, after a few minutes of this eavesdropping on his private domain, he became angered by all the noise and clatter of my man-made flying machine. He picked out an uprising current of air and disappeared above me. I circled and climbed at full power, but he outclimbed me and I never saw him again. I shall never forget the sight of that noble and solitary king of the air in his lonely world above the earth.

I learned later from other pilots that if the bald eagle is pestered too much he will attack the airplane!

Certainly the courage of wildlife deserves some consideration. We reward bravery in the soldier and the civilian. Should we not also admire the courage of wildlife?

squirrel was hiding. Almost a quarter hour passed and then I saw the rifleman raise his weapon. The squirrel fell a few feet from the seated figure. The rifleman strolled down the hill, picked up the squirrel and handed it to the other. I was so far from them that I could not hear the conversation, but I did see the interest with which the unsuccessful hunter examined both the quarry and the rifle. Finally they walked down the hill together. I suspect that squirrel hunting with a rifle had another convert that day.

When hickory nuts ripen and acorns begin to fall, squirrel hunters become restless. Their favorite weapon is checked and rechecked. Favorite covers are examined for cuttings that indicate feeding spots and new locations are sought in preparation for the beginning of season.

Veteran squirrel hunters prefer a .22 caliber target rifle of medium weight, equipped with telescopic sights and a sling. Match ammunition is used because it is superbly accurate and makes a minimum of noise. Its solid lead bullet has ample power and destroys very little edible meat.

Occasionally some enthusiast will use one of the center-fire vermin rifles. With these speedsters even head shot specimens are somewhat messy to field dress.

Other equipment adds much to the pleasure of the hunt. Squirrels must be field dressed as soon as possible so as to reach the table in prime condition. A keen blade is a must. The skin is tough, so the edge of the knife must be razor sharp.

A pair of good binoculars is a convenient aid to determining whether that odd knot on a hickory limb is just a knot or the top of a squirrel's head. The wide field of vision when compared to the telescopic sight makes observation of wildlife a pleasure and adds much to the pleasure of being afield.

A squirrel call when used sparingly is useful in bringing a squirrel out of hiding. Most of these little animals have a well developed bump of curiosity. A call prompts an immediate investigation. I remember one audacious rascal that came down the trunk of a tree a few yards from where I sat. He uttered insults and threats accompanied by much tail jerking as he came. Its rage was so ludicrous that I laughed aloud. My hilarity sent him into panic and speeded his departure.

Another hunter, witnessing the episode from some distance, came down to investigate. I suspect that he purchased a squirrel call at the first opportunity. I have at times called the little animal by making a squeaking sound by kissing the back of my hand.

One of my early teachers in this sport was George. He clung to the traditional weapons long after his contemporaries had changed to more modern arms. He had a beautiful muzzle-loading rifle that was his pride and joy. It was small and light compared with most muzzle loaders. The barrel was 31 inches long with seven-grooved rifling. The caliber was .32. With this weapon he often made five shot groups that measured less than an inch at thirty yards. Small wonder that I admired the man and the skill with which he used his ancient weapon. His kindly outlook and wonderful philosophy had a profound influence on my life. Today his weapon has an honored place in my collection.

When frost touches the leaves and the haze of Indian Summer hangs above the hills, happiness is the sight of a squirrel peering over a erotch, the heft of a good rifle, and the solitude of the big timber.



include creatures with such exotic appellations as Tasmania wolves, bandicoots, koalas, philanders, kangaroos, wallabies, and wombats.

Unlike the woodchuck, the opossum adds but a few layers of fat in late summer and fall to help it through the winter; it doesn't store away acorns and nuts in squirrel fashion; it cannot hibernate as bats, nor follow the migrating swallows. It simply has to endure the onslaughts of winter as they come, and by spring it sometimes resembles an



Leonard Lee Rue III photo

ancient, gray, disagreeable sack of bones. But when the weather is mild and food abundant, the opossum in many states becomes a much sought prize for its tasty flesh.

One fall some years ago I was on an insect-collecting trip in eastern Tennessee. About sundown, tired and hungry, I stumbled into a mountain clearing with a cabin owned by a young married couple. They were about to sit down for supper and generously invited me to join them.

I had been lost—or at least bewildered—most of the afternoon, and the odor of baking things was most tempting. Never will I forget those sweet potatoes, baked 'possum, corn bread, and greens, and although I had never eaten opossum before, the white meat of that animal was surely delicious.

Survival of the fittest begins for the baby opossum at birth. The 13-day gestation period—shorter than the pregnancy of any other mammal—is so brief that the newly born young—about as big as a navy bean—is simply unfinished. The forelimbs are well-developed, but its hindlimbs are mere embryonic buds. With the front feet it pulls itself upward by grasping the fur on its mother, and finds its way into the unique pouch, an organ that differentiates the marsupials from other mammals. There are only about a dozen nipples in the pouch, but there may be two dozen young in the litter! No sharing is possible among the young ones for once a baby has anchored itself to the milk supply, it clings there for weeks. Those that don't succeed in finding a place of attachment are 100% unlucky!

Each young opossum that survives stays with its mother for several months, often riding on her back by clinging to her fur. It frequently falls off and without assistance climbs back on again. Finally it tires of the game, falls off for the last time and shuffles away to seek its own fortune.

His interest centered on more palatable game. A muskrat, one of a late litter, hunched over a lily root. A lattice of alder branches above and a deep plunge hole beside his feeding mat fostered a sense of false security. Urocyon inched forward. He paused, tested his footing, tensed his muscles, then sprang. His momentum carried them into the water. The rodent was dead, its chest crushed by the fox jaws. He scrambled out, shook himself free of water, then picked up his prize and carried it to a nearby thicket. . . .

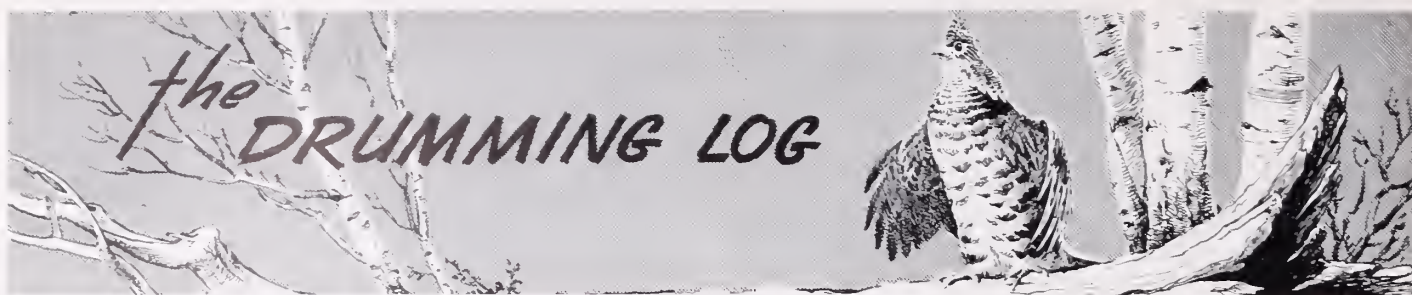
A wailing scream, rising in intensity then fading to rise again, interrupted his meal. He raised his head, pricked his ears and listened. Again he heard the sound but weaker, sinking to a sobbing moan. Something had caught a cottontail!

He pushed the partly eaten rat under a bush and with his nose covered it with fallen leaves. His anger rose. This was his hunting ground. He hurried in the direction of the sound yet with a speed tempered by caution. In a grassy meadow beside the lake lay an uprooted tree. This was the focal point of the sound. He stopped, bellied up to a



protecting piece of downed wood. He looked intently toward the shadowy tree. The sound was now a barely audible whimpering. He tested the air with sensitive nostrils but learned nothing. . . .

Suddenly a circle of light cut the darkness. It centered on a clump of grass between his hiding place and the fallen tree. A shot crashed and with it came the death squeal of a fox. Urocyon did not wait but fled away. He did not pause until he reached the safety of the rocks. Although he did not know it yet, the range was his to "have and hold." The snow began at dawn. . . .



Edited by HARRY GILLAM

### New Game Biologist To Present Conference Paper

Jack W. Raybourne, recently appointed District Game Biologist for Virginia's central mountain area, is scheduled to present a technical paper on "Telemetry of Turkey Movements" at the Southeastern Association of Game and Fish Commissioners meeting this fall. Raybourne's paper will be based on research work completed at Virginia Polytechnic Institute before joining the Game Commission staff in April of this year.

The research project involved attaching lightweight radio transmitters to four wild turkeys and monitoring their movements for 62 days in the fall of 1967. It was found that the birds traveled an average distance of 1.47 miles prior to the hunting season and 1.69 miles when hunting was in progress. They were most active in late morning and late afternoon.

Raybourne's district includes Alleghany, Augusta, Bath, Highland and Rockbridge counties. He is a native of Kentucky and obtained his B.S. degree in biology and agriculture from Western Kentucky University prior to obtaining his M.S. in wildlife management from V.P.I. He resides with his wife Patricia and daughter Karen in Waynesboro.

### 11.5 Billion Fish Succumb To Pollution In 1967

A total of 11,591,000 fish were reported killed by identifiable pollution sources in 40 states during 1967, according to a report by the Federal Water Pollution Control Administration. Additional fish kills were reported where pollution was the suspected cause. The 1967 figures are about average in both number of incidents and number of fish killed, except that the largest single kill since reporting began in 1960 occurred during the period. A valve failure in a frozen food plant released 600 gallons of ammonia into the Boone River in Iowa, killing over 6½ million fish.

Virginia, with 183,000, was seventh highest in the number of fish reported killed. The massive kill in July of 1967 on the Clinch River when a holding

reservoir failed, dumping fly ash from a power plant into the river—accounted for 162,620 of this total. Other reported Virginia fish kills involved John Kerr Reservoir, the Maury River and the Appomattox River.

Industrial pollution was still the most frequent offender, but agricultural pollution rose to occupy second place as a killer of fish, relegating municipal wastes to third. Transportation accidents were the remaining major classification.

Most of the industrial pollution cases were caused by mechanical or human failures. Storage dikes rupturing, faulty valves and pipes, and poor judgment on the part of employees in the disposition of toxic materials were the usual causes. Wash water used to rinse tanks and pipes containing toxic materials is frequently poured down storm drains with little thought as to its toxic nature. Farmers are often likewise guilty of carelessness when spray equipment is taken to the stream bank for filling or rinsing and toxic materials are allowed to drain into the stream. Drainage from agricultural feed lots was a leading killer, and natural runoff from fields treated heavily with pesticides was frequently mentioned.

Fishermen using the waters and game wardens patrolling were usually the first to report the dying fish, their promptness, in many cases, allowing investigators to accurately pinpoint the cause.

### Call Count Survey Shows Doves Down 3%

The 1968 call count survey shows breeding dove numbers down 3% in the eastern part of the United States, according to figures released by the U. S. Fish and Wildlife Service. This puts populations 8% below the 10-year average in this section. The current decrease is considered an insignificant annual fluctuation, but dove populations throughout the nation have been on a gradual downward trend since 1960.

In spite of the general decline in the East, Virginia counts revealed about 38% more doves nesting in the state than a year ago. It is the highest count

recorded in the state during the past 10 years but does not necessarily herald a proportionate increase in available birds this fall. The success of production is the key factor determining the number of birds available to the hunter. Migration patterns and crop harvest patterns, as well as prevailing weather, have a great deal to do with the quality of dove hunting in Virginia.

Personnel of the Virginia Commission of Game and Inland Fisheries assist with the call counts in late May and early June each year. The observer drives over one of the selected secondary roads, stopping for three minutes each mile and recording the number of cooing doves heard. The results are statistically analyzed to obtain the breeding population indexes for the four dove management units. Virginia personnel are also deeply involved in an extensive pre- and post-season banding program which is expected to yield much concrete information about migration and mortality, including mortality from hunting.

Nationwide, breeding dove numbers were down 3.96% for states where the birds were hunted and 4.73% for states where they are protected. In the eastern unit, the situation was reversed, with hunting states down 3.17% and non-hunting states registering a 2.75% decline.

### Corseted Trout



This trout swam through a tight-fitting can lid, then had to live with the growth-constricting ring of metal.





Edited by ANN PILCHER

### Youth Conference Evaluated

The 1965 White House Conference on Natural Beauty was the inspiration for 10 national youth organizations planning with President and Mrs. Lyndon B. Johnson the June 1966 National Youth Conference on Natural Beauty and Conservation. Five hundred young people attended this Washington meeting, then went home resolved to play a part in providing an environment of health and natural beauty and to recognize the financial responsibilities involved in the plans for action which they had approved.

President Johnson proclaimed 1967 "Youth for Natural Beauty and Conservation Year." In October 1967 fifty young delegates met in Washington for the Conference's final session. They analyzed procedures that had succeeded or failed and identified principles underlying successful youth participation in community improvement proj-

park that a youth group had cleared. In one Virginia project, 18-year-old Gregg Stevens of the Newport News YMCA worked through student councils in leading school clean-up drives involving 8,000 students. The work was commended by the mayor, who observed that Newport News and surrounding towns bordering on beautiful and historic Williamsburg need all the beautification help they can get in order to do their part for the area.

The National Youth Conference's report on the involvement of youth in community improvement, titled *Youth Power*, is well worth reading. It was recently published by the National Youth Conference, 830 Third Avenue, New York, New York, 10022, and is to be followed by another publication called *Youth Takes the Lead*, which will offer guidelines on selecting and planning community service projects, keeping them going and getting the most out of them.

Gary Lund, Takoma Park, Maryland. In the team championship match, Carter scored a 388X400; Lund, a 398X400; Strong tallied a 391X400; and Timberlake, a 395X400. Their winning score tied existing National Junior and Civilian records for the 160 shot metallic sight gallery team match.

Following the regional matches these four teenage shooters were holders or co-holders of twenty individual junior, civilian and women's National Records and fifteen National junior or civilian team records. Although all four shooters were selected to go, only Ray Carter and Diana Timberlake were able to attend the U. S. International Smallbore Rifle Championships and final tryouts for the 1968 Olympic Games held in July in San Antonio. Diana captured the National Civilian Smallbore International Position Rifle Championship with a record breaking score of 3406 x 3600. Competing in the invitational event as a junior with

### Smallbore Rifle Champions

**youth  
power**

Ray Carter

Diana Timberlake—  
a national champion

Gary Lund

Robert Strong



ects. Although the young people considered tangible results of their work important, they were primarily concerned with achieving influence in their communities—serving as catalysts, gaining broad civic support and seeing the city government institutionalize their efforts. In one case, for example, a youth organization that cleaned a waterfront site, including a small portion of a river, knew that their efforts had succeeded when a private corporation undertook to clean a larger stretch of the river. In another, a city government promised to maintain a

As a result of regional elimination matches held all over the country and attended by 1,000 competitors, the Acorns Junior Rifle Club of Alexandria, Virginia, won the 1968 National Junior Smallbore Rifle Team Championship with a record-tying score of 1563X1600 over 820 teams representing 48 states. This championship marked the fourth time since 1961 that the Acorns have topped the nation in the National Gallery event.

The 1968 team was composed of Ray Carter, Robert Strong, and Diana Timberlake, Alexandria, Virginia, and

a field of 87 of the nation's top smallbore shooters. Diana ranked fourteenth nationally, the 13 highest scorers being military personnel. This is the first time a Virginia Junior has gained a national title in smallbore shooting. Diana will attend East Tennessee State University in the fall, study secondary education, and hopes to continue shooting.

In winning the National Civilian title, she topped nine collegiate All Americans and two former civilian positions national champions.



# ON THE WATERFRONT



Edited by JIM KERRICK

## Massanutten: New Boat Landing



All-weather boat ramp at Massanutten Boat Landing, Virginia Game Commission's newest access to the Shenandoah River in Page County.

Massanutten Boat Landing, the Virginia Commission of Game and Inland Fisheries' newest boating and fishing access to the Shenandoah River, was officially opened to the public on July 2, 1968.

Donald Funkhouser of Mt. Jackson, member of the Virginia House of Delegates representing Rockingham, Page and Shenandoah Counties, performed the cutting of the ribbon, allowing the first boats to enter the water.

Among other officials present for the ceremony were Luray Mayor Fred C. Walker, Luray Town Manager Leland Pittman, Page County Sheriff Kenneth Kerkhoff and game wardens Robert Inskeep of Page County and Fred Hottle of Shenandoah County.

The site recently acquired by the Virginia Commission of Game and Inland Fisheries is part of an extensive access area development program in this section of the state.

A lake formed by the Luray Dam is approximately four miles long. It is rich

Following dedication ceremonies on July 2, boatmen wasted little time in making use of the new launching ramp on the Shenandoah River in Page County.



in scenic beauty and should prove to be a very popular recreational area.

It is the first access area, south of Front Royal, on the Shenandoah River that provides power boating and water skiing. The area has an all-weather boat ramp, toilet facilities, trash receptacles and parking accommodations for about 65 cars.

In addition to boating and water skiing, the lake should provide good fishing when motor boating activity wanes. Both smallmouth and largemouth bass



Delegate Donald Funkhouser of Mt. Jackson snips ribbon, opening the Massanutten Boat Landing. Others present at the ceremony were Luray Mayor Fred C. Walker, Game Wardens Fred Hottle of Shenandoah County and Robert Inskeep of Page County, contractor Oscar Sours of Luray, and Page County Sheriff Kenneth E. Kerkhoff.

are in the area, as well as plentiful bluegills, crappie, carp, and catfish up to nine and ten pounds.

The new access area may be reached by traveling 2.6 miles north of U.S. Rt. 211 on Va. Rt. 615.

—Text and photos by ERNIE FOLDI  
Harrisonburg

## Trailer Safety Tips

Stand to one side when winching a boat onto a trailer. In the remote case that the taut winch cable should snap or the hook straighten while you are standing in front of the winch, you may be hit by the lashing cable.

## Backing

Backing a trailer is confusing at first unless you remember this rule suggested by the boating experts. You must turn the wheel of your car to the left to make the trailer move to the right, and vice versa.

## Boat-Camping Fun For Entire Family

The boat camper gets the best of two worlds: the boatman's and the camper's.

By day he can cruise and sight-see where views are usually best on water. At night he can have a restful night's sleep and a hearty meal ashore like the traditional camper.

Boat camping requires a little care in equipment planning. Remember, boat space is limited. With a 16-foot run-about or larger, you can boat-camp with your family. Basic equipment needs are a quick erecting tent stored in a waterproof carrier, sleeping bags, air mattresses, a two-burner stove, lantern, vacuum jug, cooler, clothes line, all-purpose pocket-knife, nesting cookware set, first aid kit, and last but not least, mosquito repellent.

A good rule to follow is, carry ashore only needed items. Equipment put ashore in the afternoon will all have to be reloaded the next day.

As with any camping, sites should be selected well before sunfall. As a boatman, you'll want safe anchorage, ease of mooring, a pleasing landscape. Give attention to the avoidance of mosquitoes.

By studying your boat carefully, you can devise ways to be a "space miser." Boat seats can do double duty for storage as well as seating.

Shelving and fixtures under the fore-deck are useful to store gear handily.

Marine white gas will fuel your engine as well as your stoves and lanterns needed ashore.

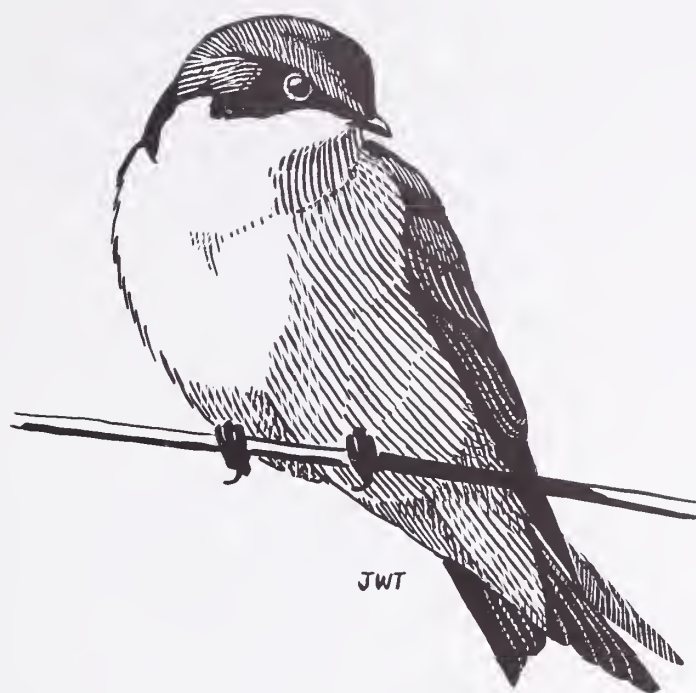
First time boat-campers should try short weekend excursions for training and experience before undertaking longer, more ambitious trips.

## Added Security

If you haven't a recent photograph of your outboard rig, better have one taken. In the event your boat and motor are stolen, you'll have something to show police that will help them considerably in tracking down your rig.



Bird  
of the  
Month:



## Tree Swallow

By DR. J. J. MURRAY  
Lexington

ALL swallows are attractive in their activities, most of them in their color patterns. They seem to spend the greater part of their daylight time on the wing, in a rapid and erratic flight, catching their food as they go through the air. Occasionally one may be seen dropping to the ground to take an insect from the grass.

The tree swallow (*Iridoprocne bicolor*) has an interesting distribution in Virginia. It normally occurs, of course, only in the warm season, but on the coast is sometimes not rare in winter. Paul Sykes counted 1,000 at Back Bay in the two days after Christmas in 1956. In the spring and fall migration, when insects are abundant, it may be seen anywhere in the state. The migration is mainly in April and May and from August to October. W. A. Cooper and Paul Sykes estimated some 10,000 at Back Bay on September 22, 1962.

This bird nests, oddly enough, at the two ends of the state. In the 1930s Maurice Brooks found it to be a "fairly common summer resident at the higher elevations" in Highland County, but it no longer seems to be very common there. In the time of Harold H. Bailey, who knew the coast country well, this bird nested only on the Eastern Shore, and even there mainly on the islands. Now it also nests, though not so commonly, on the mainland. It winters along the southern Atlantic coast, chiefly south of us.

It nests in cavities, most often now in nesting boxes pro-

vided for them, but sometimes in the cornices of buildings, or in holes made by woodpeckers.

Sometimes a male will mate with two females at the same time. That does not matter at first, as the female does all the work of incubation, but later, since the male does take part in feeding the young, his enthusiasm in building up the population catches up with him.

Four, five, or even six eggs make up a normal clutch. Sometimes two females will pile up their eggs in one nest. These eggs are pure white, mostly dull but sometimes shiny. Of normal egg shape, they average about three-fourths of an inch in length by one-half of an inch in width.

It takes about four weeks for the eggs to hatch. The young are then fed in the nest for around three weeks. The length of time in the nest will depend on the number of eggs hatched, since this decides the amount of food each young bird will get. The young are given animal food, while with the adults about 20% of the diet is made up of seeds and berries, most of it bayberries.

The tree swallow is pure white underneath. The back is bluish-green, with the wings dusky. The bill and feet are dark. The female is somewhat duller than her spouse, often with a grayish shade on the breast. This swallow is about the size of the barn swallow, but with a shorter and not deeply forked tail.

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## 22ND ANNUAL WILDLIFE ESSAY CONTEST

Sponsored By  
THE VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES  
THE VIRGINIA DIVISION OF THE IZAAK WALTON LEAGUE  
OF AMERICA

Endorsed By  
THE VIRGINIA RESOURCE-USE EDUCATION COUNCIL  
THE RESOURCE-USE EDUCATION COMMITTEE OF THE  
VIRGINIA ACADEMY OF SCIENCE

SEPT. 9, 1968-JAN. 11, 1969



# CLEAN AIR

ASK YOUR TEACHER TO ENTER YOUR SCHOOL NOW

### RULES

1. Students from all Virginia schools, grades 5-12 inclusive, are eligible.
2. Essays must be submitted through the schools participating. To be eligible, schools must submit an official entry card to receive materials.
3. Each essay submitted must indicate in the upper right hand corner: County, City, School, School Address, Principal, Grade, Name.
4. High school seniors competing for the scholarship must submit a completed scholarship form, obtainable from contest headquarters, attached to their essays.
5. Essays should not exceed 750 words.
6. Essays will be judged on the basis of originality, effort, grammar, expression and grasp of the subject. Final judging will be made by a panel of judges, representing the Commission of Game and Inland Fisheries, the Virginia Division of the Izaak Walton League of America, and the Virginia State Department of Education.
7. All essays must be sent prepaid or delivered to specified addresses and postmarked not later than January 11, 1969. For specific details see

- "Instruction Sheet to Teacher" found in the materials packet.
8. School awards will be made for 100 per cent student participation.

### PRIZES

- 1 High School Senior Conservation Scholarship \$800.00.
  - 8 Grand Prize Awards, \$50.00 each, one to each eligible grade.
  - 8 Second Prizes, \$25.00 each, one to each eligible grade.
  - 24 Third Prizes, \$15.00 each, three to each eligible grade.
  - 24 Honorable Mention Prizes, \$10.00 each, three to each eligible grade.
- Special Mention Prizes, \$5.00 each, divided among eligible grades in proportion to response.  
School Awards.  
The Scholarship Winner and the Eight Grand Prize Winners will come to Richmond as guests of honor of the sponsors and will have their awards presented to them by the Governor. Others will be given their awards in their schools.